‘Development of horizontal and central eGovernment systems in relation to the application of the Unified Model for Application, Payment and Provision of Electronic Administrative Services’

Case study of Bulgarian ESF project under the study ‘Progress Assessment of the ESF Support to Public Administration’ (PAPA)

Written by Ms Stanka Delcheva
April 2019

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Operational Programme	Operational Programme Good Governance 2014-2020, Priority Axis 'Administrative service delivery and e-governance' and Priority Axis 'Effective and professional governance in partnership with the civil society and business'
Beneficiary organisation	State e-Government Agency (SEGA)
Target groups	Public administration structures at all levels and public service providers (SEGA administration; administrative bodies and administrations at central and territorial level; and users of government services and information portal)
Project duration	12 December 2018 - 31 December 2021 (36 months)
Budget	EUR 3,579,035.83 (ESF contribution: EUR 3,042,180.8)
Project manager (email address)	Nikolay Minev, Team Leader, Director of the Information Systems and Operability Directorate, SEGA (n.minev@e-gov.bg)
Partners	Ministry of Economy, Ministry of Tourism and two executive agencies in the field of transport – Maritime Administration and Automobile Administration
Project/ organisation website	https://egov.bg

This case study was produced during the 'Progress Assessment of the ESF Support to Public Administration - PAPA' project that was contracted by DG Employment, Social Affairs and Inclusion of the European Commission. The purpose of this project was to present specific cases of ESF-funded public administration reform and capacity building initiatives, as well as to show the role of ESF financial support to public administration for accountability purposes. This report provides a story on the project '**Development of horizontal and central eGovernment systems in relation to the application of the Unified Model for Application, Payment and Provision of Electronic Administrative Services'**, which discusses its context and purpose; characteristics of the team implementing it; main challenges faced and difficulties encountered during implementation; key developments during the implementation process; results and impacts achieved; as well as lessons learnt and the contribution of ESF.

DEVELOPMENT OF HORIZONTAL AND CENTRAL E-GOVERNMENT SYSTEMS IN RELATION TO THE APPLICATION OF THE UNIFIED MODEL FOR APPLICATION, PAYMENT AND PROVISION OF ELECTRONIC ADMINISTRATIVE SERVICES

Introduction: the context of the project

The development of electronic government (e-Government) and electronic administrative services (e-Services) has been a priority for several Bulgarian governments in the period since 1998. The penetration of modern information technologies into government was included as a topic in the first 'Strategy for Building a Modern Public Administration in the Republic of Bulgaria' in 1998, and in the first adopted 'Strategy for Electronic Government' in 2002. Some of the measures were implemented with the financial support of the PHARE Programme, and with the support of ESF through Operational Programme Administrative Capacity (OPAC) in 2007-2013 and the Operational Programme Good Governance (OPGG) in 2014 -2020.

Despite the explicit focus on the introduction and development of electronic government in the past 20 years, there was limited progress in the policy making and implementation until 2015. In an attempt to accelerate the process, responsibilities were vested in different ministries and agencies. From 2001, policy implementation was coordinated by the Minister of State Administration, assisted by the Information, Communication and Management Technology Coordination Centre. In 2005, the functions were divided between the Ministry of State Administration and Administrative Reform and the State Agency for Information Technology and Communications. Between 2009 and 2015, the development of e-government was concentrated in the Ministry of Transport, Information Technologies and Communications, including the Electronic Communication Networks and Information Systems Implementing Agency (which was established in 2009). At the same time, the Administrative Reform Council and the Council of Ministers administration was tasked with the policy on administrative services, which includes e-Services.

For the purposes of this case study, 'administrative service' is understood as any interaction between public administrations and citizens or businesses, where the administrations provide documents certifying facts, or the presence or absence of rights and obligations. Application for, and delivery of, remote administrative services electronically is defined in the norms as electronic administrative services (EAS) – issuing of various certificates, provision of information, references, submitting the necessary documents (tax declarations, regulatory information and references etc.).

Since 2007, and with the financial support of ESF, numerous projects have been implemented for development of EAS in individual administrations, mostly at the municipal level, as well as several large projects for development of EAS that were implemented by the Ministry of Transport, Information Technology and Communications. Nevertheless, those services and the centrally developed components of electronic government (such as RegiX - the inter-register exchange environment) failed to function in an integrated way. A functional e-Government necessitates the presence of a unified, interconnected ecosystem, based on interoperability – electronic information exchange between individual institutions, services and databases - which is not the case in Bulgaria. Instead of a network of services, the result is rather separate

'electronic islands' with very little connection among them. The reasons are complex, but largely due to the condition of the registers and data pools in the administration.

Any e-Government ecosystem is founded on the base registries, which are used by governments to automatically validate or fetch data relating to citizens or businesses[1], and must be able to communicate with each other. The inventory held in 2018, under the TASM project financed by OPGG (see separate PAPA case study), showed that quite a few registers and data pools were paper based, had not been digitalised yet and were not planned in a way that would allow joint use and easy automated data extraction. More fundamental was the frequent failure of the administration in charge of maintaining and providing e-Services to realise how they work and why it is good to develop them. Here and there resistance exists to the introduction of e-Government, as it means a change in the way the administration has been working for many years and releasing the control when working with other administrations for provision of complex administrative services (see TASM case study). This limited capacity reveals itself in the inability to implement the developed modules (or 'improper implementation'). There are huge difficulties of exerting quality control over external contractors which maintain the technological aspect.

The low level of technological readiness of the administrations and the limited opportunities for attracting IT professionals are also factors that impede the practical implementation of e-Government. High-performance computing and IT resources are still concentrated in the central administrations, regardless of the fact that the municipal administrations are the main administrative service provider[2]. The issue of 'technological deficit' is important – the technologies develop dynamically, including in the field of e-Government, meaning electronic systems that have already been built become outdated and turn into an impediment to the development or integration of new systems and services. The same is true of the hardware and software in the administration.

A frequent argument in favour of postponing or delaying the launching of e-Government by the administration is their uncertainty as to whether the EAS will have sufficient users. Indeed, various surveys over the past three years show that the proportion of people using EAS from central or municipal administrations is still rather small, despite increasing from 4.5% at the end of 2017 to almost 10% in 2019[3]. At the same time, more than 72% of the households in Bulgaria have access to internet in their homes[4]. Behind this data, it should be noted that most citizens and businesses use services provided by the municipalities, while the functional EAS are currently much more concentrated in the central administration[5]. At the same time, the e-Government deficit is not restricted to administrative services from central and local government and the official exchanges between administrations ('internal' e-Services). 'Electronic health' (e-Health) is still on paper only – the electronic prescriptions are not in circulation and the existing e-Health personal files contain very limited information.

Against this background, clear political will was demonstrated after 2014 to overcome the failure to launch and put in practice a functioning e-Government system. It was registered[6] that, in the

[1] European Commission (2017), 'Quality of Public Administration A Toolbox for Practitioners'.

[2] Status report and detailed development plan for upgrading of the information resources in the administration and the information resources of the single electronic communication network of the state administration for national security purposes, August 2018.

[3] See: https://www.mediapool.bg/pod-5-ot-balgarite-polzvat-administrativni-e-uslugi-news273382.html; https://www.e-gov.bg/bg/media/19

[4] According to National Statistical Institute data for 2018.

[5] See: https://blog.bozho.net/blog/3167

[6] Draft motives to draft Law amending the Law for Electronic Governance, published on 01/10/2015, http://www.strategy.bg/PublicConsultations/View.aspx?lang=bg-BG&Id=1830

previous 15 years, the individual administrations had been implementing uncoordinated policies for service digitalisation, and were building their own capacity and infrastructure, serving predominantly their internal needs. There was an apparent need to centralise the efforts to integrate e-Government into a single structure, to eliminate the duplication of infrastructure and overlapping of systems in the administration and secure clear rules for admissibility of the e-Government projects, as well as optimise the existing processes in the administration.

In July 2016, the State e-Government Agency (SEGA) was established through amendments to the Law on Electronic Governance[7] with functions in the development, implementation and control of policies, rules and good practice, strategic planning and legislative initiatives, budget programming and control, coordination of sector policies and sector and inter-institutional projects, as well as maintenance of centralised registers for the electronic government needs, maintenance of centralised registers, development of information centres, 'State Hybrid Private Cloud'[8] and the communication network of the state administration. For the first time, a structure was created with strong powers in the field of e-Government, and information and communication technologies (ICT), including for issuing mandatory orders and instructions to all administrations. SEGA has various powers to impose uniform policies, standards, and standard requirements in terms of buying assets, developing information systems and prioritising e-Services, as well as powers and functions for building and maintaining shared infrastructure (shared information resources of e-Government) to be used by all state bodies for economies of scale.

Design and execution of the ESF-funded projects

Purpose of the ESF-supported project(s)

With the financial support of ESF in 2007-2013, several large projects were implemented by the Ministry of Transport, Information Technology and Communications for development of e-Services. In these projects:

- The existing electronic services and developed information resources of e-Government were analysed, developed and prioritised;
- A reference model of the central and municipal administrations architecture[9] was designed;
- The current central electronic government system[10] was upgraded through creation of a register for electronic use identification;
- Development of the 'common electronic documents exchange environment' (CEDEE) and introduction of a central document flow system;

[7] Published in State Gazette, issue 50 of 2016.

[8] The State Hybrid Private Cloud (official name) is a highly resilient cloud infrastructure, located at two data centres (primary and mirror), including eManagement Control Centre and Data Support Centre. It delivers infrastructure as a service, and is a 'hybrid cloud' in nature.

[9] Project BG051PO002-3.1.03-0001-C0001/ Development of the electronic administrative service.

[10] Project BG051PO002-3.2.02-0001-C0001/ Improving the administrative service of the users through further development of the central electronic governance system.

- Building a centralised system for information security and interoperability monitoring and management system[11].

The latest three large projects[12] built key modules for e-Government:

- E-validation of electronic documents and prints of electronic documents;
- E-delivery of electronic documents;
- Updating the Bulgarian national framework for interoperability of the information systems in the executive authorities;
- State administration registers are published in RegiX for internal access and connecting of sector information systems of the state administration to these registers.

The scope of these projects included the main elements needed to develop interoperable e-Government. In practice, however, in 2017 the new agency team of SEGA faced the challenge of finding a solution for making further progress with the reform, taken the existing tools and identified needs. In the new 2014-2020 programme period, overcoming the challenges to the integration of e-Government is a priority of the national strategic documents in the field of administration and e-Government, as well as the OPGG. In this context, SEGA became the beneficiary of one of the key horizontal projects in this field, 'Development of the horizontal and central eGovernment systems in relation to the application of the Unified Model for Application, Payment and Provision of Electronic Administrative Services' (project DevdGovUM), in partnership with the Ministry of Economy, Ministry of Tourism and two implementing agencies in the field of transport, the Maritime Administration and the Automobile Administration.

The project planning was the result of analysis, assessing the need for development of horizontal systems that would allow operability and connectedness (interoperability) of e-Government across the administrations, provided they are ready with resources and timelines. DevdGovUM aims to create the necessary conditions for the functioning of the unified model, which will:

- Improve the access to electronic administrative services (EAS);
- Make the transition to provision of complex administrative services (see TASM case study); and
- Reduce the administrative burden on citizens and businesses in their interaction with administrative bodies and their structures.

Formally, DevdGovUM started in December 2018 and should be completed in December 2021. The total project budget is EUR 3,579,035.83, of which EUR 3,042,180.45 is ESF co-financing. The project comprises 12 activities:

1. Developing standards, rules and procedures related to the use of the unified model for application, payment and delivery of electronic administrative services;
2. Developing an electronic forms (eForms) management system for application, payment and delivery of EAS and integration with the horizontal systems for electronic government;
3. Upgrading the eAuthentication (eAuth) system;
4. Upgrading the eDelivery (eServing of documents) system;

[11] Project BG051PO002-3.2.05-0001-C0001/ Development of the existing and building new centralised electronic governance systems in view of improving the information and communication environment for better administrative services for the citizens and the business.

[12] See 9, 10 and 11 footnotes.

5. Upgrading the ePayment system;
6. Upgrading the enterprise service bus for access and management of IT services and data;
7. Upgrading the inter-register exchange system (RegiX);
8. Upgrading the Single Portal for access to electronic administrative services;
9. Developing Forms for EAS, and integrating the information systems of state administrative structures with the horizontal e-government systems;
10. Purchasing the licenses necessary for the functioning of the unified model;
11. Training officers in the state administration for work with the horizontal e-government systems; and
12. Promoting the opportunities to use the unified model for application, payment and delivery of EAS.

Implementation of the ESF project: main developments

Before the formal signing of the grant agreement with OPGG, the SEGA team had already laid the foundations for DevdGovUM between August 2016 and November 2018 with their own, in-house resources. Nikolay Minev, the team leader in SEGA, was in favour of the evolutionary development of models, systems and services, rather than yet more revolutionary steps that could increase the existing disorder and chaos. In his capacity as Director of the Information Systems and Operability Directorate of SEGA since the beginning of 2017, he defined his number one goal as introducing clarity as to which systems and services would be developed with the financial support of various programmes and projects, and how the target value of one of the main OPGG indicators for 2018 – '150 functional administrative services' - could be achieved.

By the beginning of 2017, the Bulgarian administration had seven information systems and models in various phases of completeness and readiness. The question was how those seven components could be integrated for effective exploitation. The answer was to develop the 'unified model for application, payment and provision of electronic administrative services'[13]. This document describes the unified model that includes the necessary stages for a step-by-step implementation of the model and related requirements for IT infrastructure. The envisaged actions are fully aligned with the e-Government vision of the Republic of Bulgaria 2020.

Thus, the conception of the project actually began earlier than the formal date of signing the grant agreement. During this preliminary stage, SEGA had a very small team of just three to four persons. Nikolay Minev believes that one of the main problems regarding projects and reforms of this scope is their equipment with experts. In his view, it is very difficult to effectively manage such systems and projects worth millions with low remuneration of labour. Although Bulgaria is famous for its IT specialists and has, in the latter years, been recognised as a centre of information service development on European and world scales, this also has a dark side when it comes to e-Government development. In the private sector, IT specialists are still in high demand, the salaries are high and therefore those willing to work in public administration where the compensation is lagging far behind are very few. Nevertheless, there are more than 30 experts in the Information Systems and Operability Directorate. The chairperson of SEGA, Atanas Temelkov[14], has publicly expressed his opinion that the inclusion of as many agency experts as possible in developing the overall e-Government architecture is an approach that ensures greater sustainability of knowledge and expertise than the development of separate components by

[13] See: http://unifiedmodel.egov.bg/wps/portal/unified-model/home

[14] See: https://www.e-gov.bg/bg/media/19

external contractors. The use of internal expertise was the approach used for key activities of the DevdGovUM project, particularly developing the unified model and the eForms for application, payment and delivery of EAS.

The project team faced several important decisions, especially which technology to use to upgrade the existing system and develop the new systems. This decision concerned the possibility to impose standards for the use of uniform tools and instruments. The unified approach to upgrading and developing the individual elements was crucial for achieving success. Nikolay Minev believes that this approach should be oriented to the needs of the citizens and businesses and that only a user orientation can restore trust in the institutions. Relying on external contractors also carries higher risks, when the in-house contract management capacity is limited, directly affecting the timing and quality management of the project activities. These decisions were reflected in the upgrading and development of each project activity, as set out below.

Unified Portal for Access to Electronic Administrative Services (UPAEAS)[15]

The UPAEAS is the single point of access to information on all available EAS, and their terms of use for citizens, businesses, public administrations, software developers and specialists in the integration of various functionalities. It contains a **central application** module for e-Services with a choice of specific services from specific administrations. A **Myspace** module is a personal user profile – institutional, business or individual - where documents can be stored, along with a full copy of the communication with various institutions initiated through the portal, the results of provided EAS etc.

Electronic authentication system

An important element in the unified model is the system of electronic authentication of persons accessing e-Government resources. It ensures privacy by protecting the identification data through the application of established standards. So far, no electronic identification is available for citizens in Bulgaria. It is under development and expected to be phased in soon during regular replacement of ID cards.

The eAuthentication system provides services for integration in / use by other systems and services. It works with the three basic schemes for access to EAS:

- *Qualified Electronic Signature (QES) authentication* - all EAS are available with QES authentication. It is issued by a provider of certification services upon presentation of an identity document and payment of a fee. It is a physical device (usually a USB stick) and is valid for one calendar year from the date of issue. In the last year or two, cloud QES services, which are accessible through a personal mobile device, have also been introduced. QES is mainly used by business and by a very small proportion of citizens.
- *Identification with Personal Identification Code (PIC)* - issued by the National Revenue Agency or the National Social Security Institute. The access scheme has been created to extend citizens' access to the EAS. This is an identification with a username and password, where the username is a standard national identifier, usually a Unified Citizenship Number (UCN) / Personal Number of a Foreigner (PNF), and the password is the specified PIC. An additional layer of security is the requirement that a PIC be requested and delivered in person upon presentation of an identity document. A

[15] See: https://egov.bg

significant number of EAS are available by PIC. Each administration can decide which services should be available by PIC and for which a QES is required.

- *Registration with a name and a password confirmed by a valid email address*; It provides access to the least sensitive EAS, such as requests for access to information, participation in public consultations, provision of feedback and more.

New types of identification are added when they become available. There is also name and password authentication. The protocol is compatible with the European requirements for electronic ID and authentication (eIDAS regulation). Each administration decides what level/ authentication type to use for EAS provision.

Electronic forms management system

The eForms system was created by the project with the use of Adobe, which has several advantages:

- It works smoothly with QES because it is a desktop application.
- It allows the creation of forms by the project team without any need for external contracting.
- It has a good security level. The empty form is signed with the QES of SEGA and in this way protected from modifications (any modification of the original will invalidate the signature of SEGA). The completed form is signed with the applicant's QES and identifies him or her.

The eForms were almost entirely developed with the internal expertise of the SEGA Directorate's team. Nikolay Minkov underscored the added value of the approach – it had the effect of competitive drive for the experts in the team, nourished by the visible results of each created form. The number of developed EAS forms is one of the project indicators. The set target value of this indicator was achieved with the development of 150 electronic forms.

The eForms are an example of the decisions the team had to make regarding which technologies to use for each system. As a solution, for example, the eForms that had already been created using PDF are functional for the moment, but this is likely to change significantly in the future in terms of technology and functionality. In the opinion of Yavor Markov, IT expert experienced in information systems development and implementation in the administration, the advantage of this solution is that it is relatively popular (used for instance in the Participant Portal of Horizon 2020), ensures the necessary security level, and allows SEGA to exercise full control of the accessible services and enrich them, with or without external contracting. The solution also allows integration with other systems through the exchange of structured text data stored in the e-Form.

The processing of an EAS has to be accomplished by the Administrative Information System (AIS - an Electronic Document Management System) of the respective institution that provides the EAS. Those are standardised and certified systems developed by commercial entities. At present, AIS does not have a built-in capability to read automatically the filled in eForms, delivered by the centralised eForms Management System. An additional integration resource (a system-to-system connector) has to be developed by the AIS manufacturers and procured by the institutions.

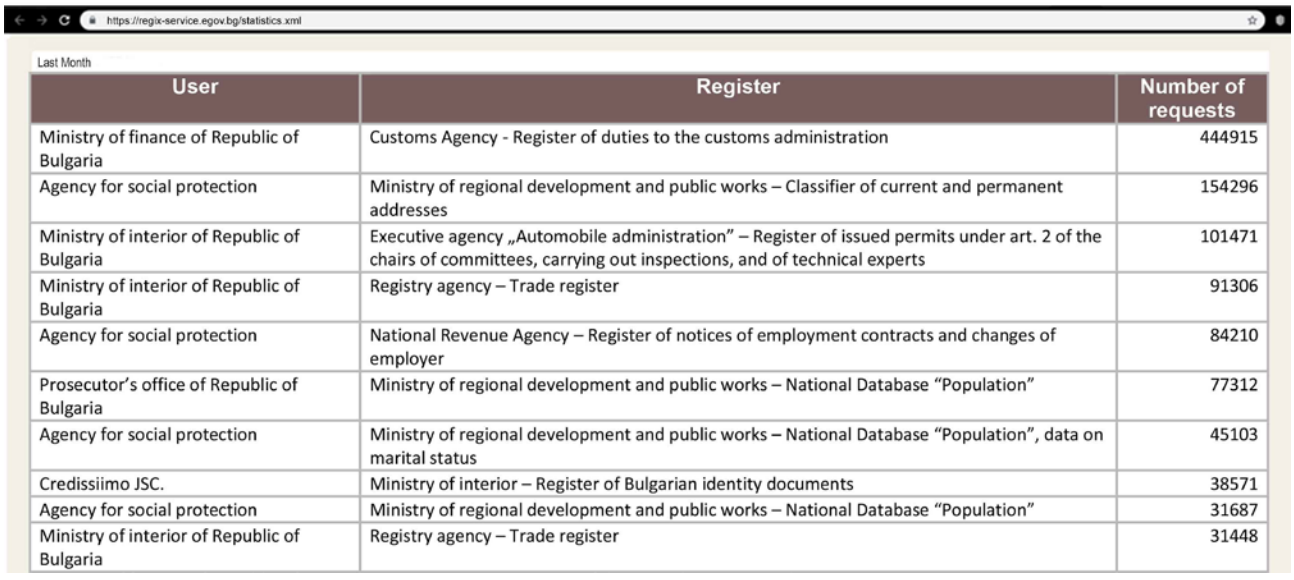
This problem was identified as an impediment by Ventsislav Kozhuharov, expert of the National Association of Municipalities in the Republic of Bulgaria (NAMRB). In fact, the completed form

can reach a given institution through the eDelivery system, but a 'connector' is needed for an automatic entry. For most institutions, the solution requires maintenance of identical forms and settings in at least two points - on the institutional space within UPAEAS and on an electronic services portal of the respective institution. This is a potential source of difficulties. To this end, the NAMRB expert emphasised that the EAS provision forms for many municipal services are not normatively standardised, i.e. every municipality can and produces its own forms, more or less different from those of other municipalities.

***RegiX*[16]**

One of the conditions for achieving complex administrative services (see TASM case study) for citizens and businesses is the creation of internal EAS. The provision of these services relies on the inter-register exchange environment (RegiX), which allows an automated application and provision of information between the administrations and registers, included in RegiX. The developed components enable the connection of individual administrations' information systems. In this way, each administration that seeks information about citizens or businesses can automatically extract data held by other administrations from registers, included in RegiX. Among them are the national 'population' database, the BULSTAT register, the property register, commercial register, register of liabilities to the Customs Administration, register of personal data administrators, register of Bulgarian identity documents, common register of foreigners, register of secondary schools and kindergartens, register of diplomas and secondary education certificates and of acquired professional qualification degree, register of insolvency proceedings, and register of debtors, *inter alia*. By March 2019, there were 65 main connected registers administered by 25 central administrations (ministries and implementing agencies) and 168 official electronic services/references in the registers[17].

Figure 1. Statistical information on using RegiX for June 2019


https://regix-service.egov.bg/statistics.xml

Last Month

User	Register	Number of requests
Ministry of finance of Republic of Bulgaria	Customs Agency - Register of duties to the customs administration	444915
Agency for social protection	Ministry of regional development and public works – Classifier of current and permanent addresses	154296
Ministry of interior of Republic of Bulgaria	Executive agency „Automobile administration" – Register of issued permits under art. 2 of the chairs of committees, carrying out inspections, and of technical experts	101471
Ministry of interior of Republic of Bulgaria	Registry agency – Trade register	91306
Agency for social protection	National Revenue Agency – Register of notices of employment contracts and changes of employer	84210
Prosecutor's office of Republic of Bulgaria	Ministry of regional development and public works – National Database "Population"	77312
Agency for social protection	Ministry of regional development and public works – National Database "Population", data on marital status	45103
Credissiimo JSC.	Ministry of interior – Register of Bulgarian identity documents	38571
Agency for social protection	Ministry of regional development and public works – National Database "Population"	31687
Ministry of interior of Republic of Bulgaria	Registry agency – Trade register	31448

Source: https://regix-service.egov.bg/statistics.xml

[16] See: https://regix-service.egov.bg/; http://regixaisweb.egov.bg/RegiXInfo
[17] See: https://e-gov.bg/bg/143

Electronic payment system (ePayment)[18]

The system is an electronic payment environment, which registers all ePayments of the provided EAS, creates ePayment documents, and ensures payment in a way selected by the user (citizens and businesses). The purpose is to provide users with various means of payment and make the process of notifying the administration of those payments automatic. This will considerably reduce the time necessary for the provision of each service and avoid human error. It also contains a unified, virtual point-of-sale (POS) terminal.

There are two main online payment schemes: fully centralised and decentralised by institution.

The project team's preference was for the fully centralised approach. It consists of a single virtual POS terminal working with a main Bulgarian National Bank (BNB) account which redirects payments to the respective (sub) accounts of institutions, providing an EAS.

However, a number of institutions have a history of using institutional bank accounts in commercial banks for collection of fees for delivery of paper-based administrative services. Some of the institutions have implemented virtual POS terminals for payment of administrative services as well. According to Nikolay Minev, the project team had to convince the leadership of the Ministry of Finance that it is acceptable for the *ePayment* system to support institutional bank accounts and virtual POS terminals in commercial banks and not just the BNB.

Other (non-electronic) payment types are also possible with a prior electronic payment order, generated by the system. This allows tracking and automatic processing of all payments (if one generates an electronic payment order with a bank transfer and they make the payment at a bank teller, the system will know where to check periodically and automatically if the payment has been accomplished).

Electronic delivery service (eDelivery)[19]

The eDelivery service verifies: the time of sending documents and messages by the sender; the time of receiving documents and messages by the receiver, security and safety of the communication; and the evidence of the communication and guarantee of authenticity of the exchanged documents. The system is standardised as 'electronic registered mail' with a registered time of delivery.

At the beginning of 2017, the eDelivery system had just three test users. In June 2019, there were more than 18,000 users, including doctors and medical practices, who can use the system to communicate with the National Health Insurance Fund. The system also enables users to communicate with the National Inspectorate of Education, schools and kindergartens, central and local institutions (including mayoralties), and commercial companies. By mid-2019, however, the municipal administrations were less-active users of the system - just 68 municipalities were registered users out of 265 in total. After normative obligation was introduced for the notaries to officially notify the municipalities of property transactions on their territory, the system is now used by the notaries as well, but only for the registered municipalities.

Electronic authorisation system (eOtor)

The electronic authorisation system, connected to the electronic authentication, is a horizontal system that guarantees the institutions will only have access to registers and information as set

[18] See: https://pay.egov.bg
[19] See: https://edelivery.egov.bg

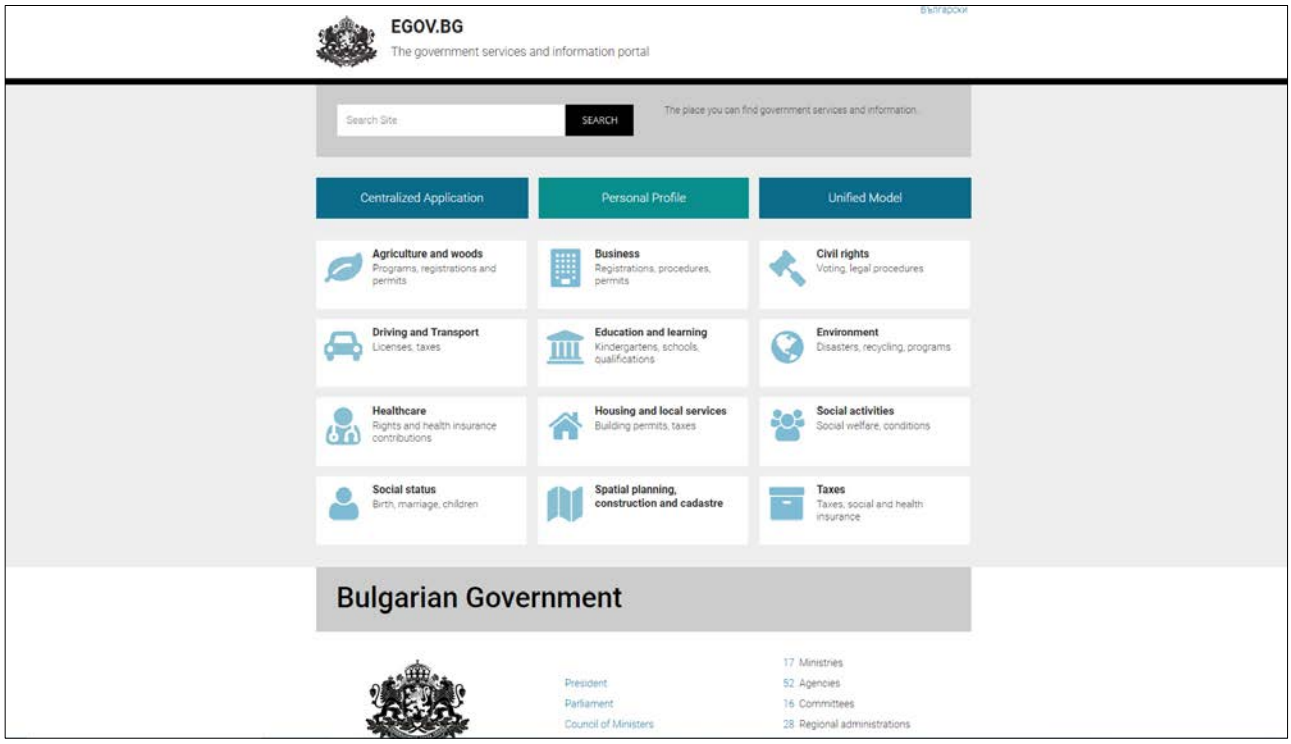
out in the normative arrangements. It introduces strict centralised policies and imposes a single control of access to the resources that the e-Government operates with.

Standardised internet portals

The project envisages development of a common methodology and procedure for building new federated portals of the administrations, and common rules and procedures for interaction between the participants in the unified model and association of new and/or existing electronic administrative services. So far, the sites of few administrations have been upgraded - the Single portal for access to electronic administrative services[20], Vidin municipality, and the Customs Agency. Work is going on with the site of the National Revenue Agency.

The single portal for access to EAS provides information to administrations, citizens and businesses (see Figure 2).

Figure 2. The government service and information portal



Source: https://egov.bg/wps/portal/en

The portal provides technical information for developers, who have to integrate EAS available through the Unified Portal for Access to Electronic Administrative Services with external systems, e.g. electronic document management systems of institutions.

The project performance indicators include number of administrations supported for complex administrative service provision, number of supported electronic services for transaction provision, number of trained officers for working with horizontal e-government systems. The main project activities are still in the course of implementation, but the achievements and tasks of all contractors show a high likelihood for achievement of the set indicators.

[20] See: https://egov.bg/wps/portal/en

Conclusion

Main results

Although the project formally started in December 2018, the preliminary implementation of a large volume of activities for assessment of the existing systems and planning of the opportunities for securing their compatibility ensured the necessary progress in the achievement of the project objectives. So far, the single portal for access to electronic services is functional and the activity and use of the individual systems in growing dynamically.

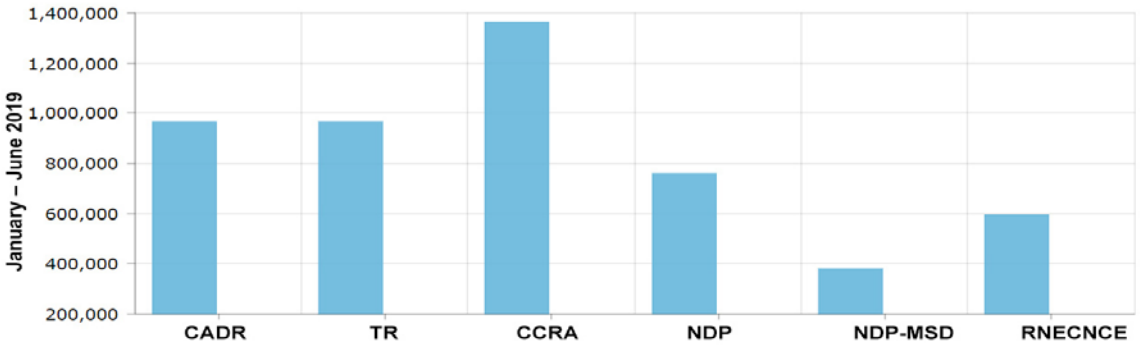
The use of the electronic delivery system module has increased significantly. Another significant result is the upgrading of the existing RegiX system. In the opinion of Ventsislav Kozhuharov, the work on the project has 'unlocked' the electronic service processes in the municipalities.

Registered difficulties during the previous planning period included vastly different levels of readiness for automated information exchange among individual institutions and the respective registers they maintained. The current work is in a direction that can guarantee a standardised inter-register exchange environment, independent of the particular technical register implementations in the respective institutions.

Various administrations and municipalities are joining in RegiX when ready. This reflects the opinion of the NAMRB expert that great differences still exist in the readiness of the municipalities to work with RegiX and e-Service provision. Contracting-out requires financial resources, which is a problem for the smaller municipalities. Nevertheless, there are municipalities that are leaders in the use of the systems. At the beginning of 2017, the overall monthly transactions from all types' administration were around 90,000; in June 2019, they reached 2 million.

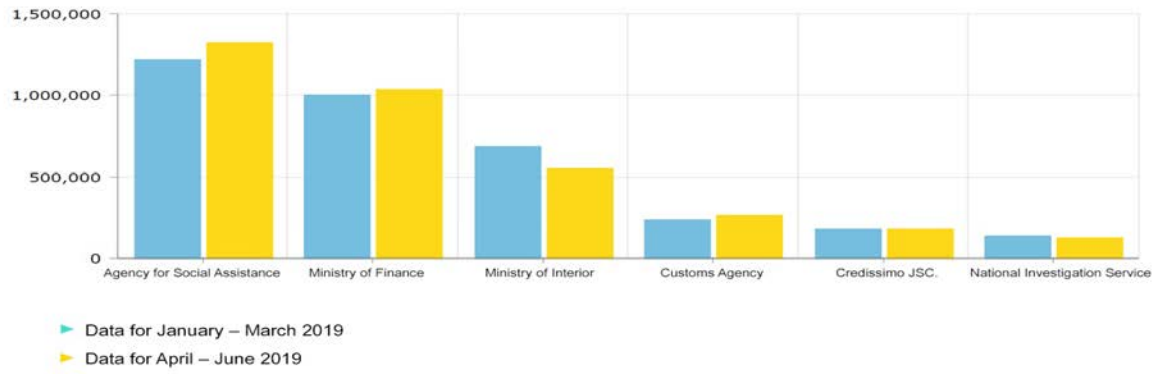
Statistics for the first six month of 2019 reveal preliminary usage trends of RegiX. The Ministry of Finance and the State Assistance Agency remain the two administrations with the largest share of requests followed, by the Ministry of Interior and the Customs Agency. The request rate is increasing, the number of requests for the first six month of 2019 for some administrations are above their 2018 totals (see Figures 3 and 4).

Figure 3. Number of request to the main register of the state administration



List of abbreviations: CADR – Customs Agency – Register of duties to the customs administration; TR – Trade Register; CCRA – Classifier of current and permanent addresses; NDP – National Database 'Population'; NDP-MSD – National Database 'Population' – marital status data; RNECNCE – Register of notices of employment contracts and notices of change of employer
Source: Single portal for access to electronic administrative services

Figure 4. Consumers with the largest number of request to the main register of the state administration



Source: Single portal for access to electronic administrative services

Use of the opportunities provided for internal access to information in the registers of other administrations by the municipalities is still limited. They believe the rules for integration to RegiX are very complicated, their need for such access is limited and the procedures for interaction with other administration are too intricate.

Also, eForms have been developed for over 150 electronic services, which is a significant contribution to the implementation indicators of OPGG for 2018.

IT expert, Yavor Markov, said that the development of the e-Authentication system is a very positive factor. It has additional advantages in accomplishing the SEGA requirement for access to the systems of institutions / administrations in a standardised way, and in agreement with international standards like openID.

The integration of the e-Authentication system in various systems requires efforts (IT resources), but has the potential to gradually become a standard. The upgrading of the eDelivery system is a very positive development, as it address the interaction between the citizens/businesses and administrations in the same way that the electronic document exchange system improves the internal interaction between the administrative bodies. The electronic document exchange system is reported as a substantial success, including by NAMRB. The municipalities had to allocate resources for the upgrading of their administrative information systems. NAMRB concluded that municipalities with more intense interaction with citizens and businesses are inclined to allocate the necessary resources, while those that provide fewer EAS are in no hurry.

For citizens and businesses, the ePayment system eases greatly the process of paying for EAS from any administration, by opening up various options including payment from a single point with a virtual POS terminal, electronic payment order to a bank etc.

Barriers to the widespread adoption of the centralized ePayment system are existing local solutions in some administrations, especially virtual POS terminals or electronic payment services (such as micropayments through ePay.bg, PayPal, etc.) integrated in their administrative information systems. Such local solutions exist in 50% to 60% of all municipalities according to the NAMRB and remove the impetus to adopt the centralized ePayment system.

The transition to a centralised system requires a change in contractual relations between institutions on one side and commercial banks and electronic payment service providers on the other. It needs perhaps an IT resource for integration of the payment services as well.

Four central administrations were included in the project implementation – two ministries and two executive agencies, each of them in an advanced stage of building electronic service components. The Ministry for Tourism for example planned the development of electronic government at the beginning of 2018 in its systemic activity 'Planning and management'. In the summer of 2018, the creation of an e-government portal of the ministry was contracted to be financed with budget funds. The work was completed at the end of 2018. The portal has citizen and business authentication with electronic signature and cloud electronic signature. This makes it a leader in cloud electronic signature service provision. In January 2019 the ministry signed a partnership agreement with SEGA for development of eForms. The project created 25 electronic administrative services for the Single portal, whose eForms are fully compatible with those created on the Ministry of tourism's portal. The project also added a virtual POS terminal of the ministry to the Single portal for online payments of electronic services. Work is currently going on for the integration of the eDelivery system for users.

The project team is still in the process of upgrading the main systems in the unified model. In the opinion of Nikolay Minev, the already secured 365/24/7 maintenance of the systems is very important to their current modification. Although the main components of the unified model are functioning and the users increasing exponentially, the promotional activities were postponed for the next period of the project implementation. Instead, the team has focused its attention on the work security and on testing the system scaling opportunities[21].

In fact, all systems as elements of the unified model require integration (connectors) with the administrative information systems, which is likely a process and not a single step, because they are also developing, just like the AIS and the unified model for EAS provision. The natural leaders in the integration are administrations with higher levels of use of the new systems, which will probably allocate the necessary financial/IT resources anyway. It is highly likely that the smaller administrations, and especially the municipalities, will need financial support.

The working elements of the unified model for application, payment and delivery of electronic administrative services will have an enormous impact on citizens and businesses. After years of invested efforts, getting administrative services will be smooth and easy. There will be no more need for multiple visits to one or several administrations (often in different cities) or for submitting certifying documents and information that has already been stored in other administrations.

Lessons learnt

The e-Service development process is two-way and requires a balance of interests. In addition, technologies will become outdated with time. Therefore, the work of the team aims to create an environment that can evolve easily without the need for complicated terms of reference for external contractors. This will reduce the risks, emerging from the lack of technological capacity of the administrations and therefore improve the quality of the results. Influential factors for the working environment in the administration will be to clarify the benefits of digitalization to the officers in the administration and offer them training.

[21] The scaling of a system is its ability to exponentially take larger data volumes without any effect on the normal work speed. The systems are often designed for a certain work volume and its increase by 1-2 levels leads to problems in the system use. Volume here means both the data volume and the number of users, servers, branches, offices etc.

The future steps in the development could be targeted at automatic user identification by the system – so that it knows who they are, what their needs are, and what problems they are trying to solve at a given time. There is also the opportunity for additional use of the eAuthentication system by businesses, if trust is generated among the user community.

Role of ESF support

ESF had already co-financed a substantial part of the system in 2007-2013 through OP Administrative Capacity, laying the foundations for the unified model for application, payment and delivery of EAS. Through the OP Good Government, ESF in 2014-2020 has enabled the upgrading of those systems and the entire process of e-Services provision, while the costs of design, maintenance and exploitation of the systems are covered by the state budget.

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